

produced which exhibits an improved harmonic quality compared to that of the original audio signal. In this way, the present invention [adds] can be seen as adding enhancing harmonics to the [electronic] original audio signal. Sound produced from an audio signal enhanced in accordance with the present invention appears to resist becoming distorted at high volumes and tends to eliminate, or at least significantly reduce, the formation of sweet spots.

When an audio signal in the form of a square wave with multiple frequencies is transmitted through an apparatus according to the principles of the present invention, the resulting enhanced audio signal is non-linear with frequencies which at least increase in amplitude as per increasing frequencies from a desired reference frequency toward the high end of the signal. It is desirable for the present apparatus to be operatively adapted so that when the square wave is transmitted therethrough the enhanced audio signal also has frequencies which increase in amplitude as per decreasing frequencies from the reference frequency toward its low end

~~On page 4, line 22 of the specification as originally filed, after "embraced, as in" insert -- the above aspect of --, and after "the present invention" insert --, and the enhancing effect of distorting an audio signal according to the principles of the present invention remained unknown.~~

~~On page 6, line 24, replace "plus additional" with -- with accentuated --.~~

~~On page 7, line 21, delete "(power level)"; on line 22, after "coil 18." insert - In addition,~~

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*B3*  
*B6* the amplitudes of the higher frequencies of the enhanced audio signal are non-linearly distorted. --;

on line 23, delete "therefore";

*B4* on line 24, replace "109" with -- such as, for example, the network comprising components 122-128 --, after "which" insert --/ attenuates the amplification of the high frequencies and non-linearly --, and after "favors" insert -- the amplification of --; and

on line 25, after the first "frequencies" delete the remainder of the sentence.

On page 10, line 1, replace "50" with --52--.

*B6* On page 13, line 19, replace "The" with --Each--; on line 20, replace "signals are" with --signal is--, and after "through" insert --an--;

replace line 21 with -- which non-linearly distorts the amplitudes of selective high frequencies. Each of the --;

*B7* on line 22, after "potentiometers 96" replace the remainder of line 22 with -- can be used to adjust the amplitude of the frequencies of the corresponding enhanced signal uniformly across the signal's frequency band while maintaining the desirable non-linear distortion caused by its corresponding system 54. --;

*B8* on line 23, replace "respective" with -- Each of the shaping networks 109 is used to control the shape of the high frequency non-linear distortion caused by its corresponding system 54. The high frequency non-linear distortion includes a high frequency peak. Each of the --, delete "which", delete "also", and after "alter the" insert -- corresponding--;

on line 24, replace "networks" with --network--, and after "adjust" insert -- the amplitude of the high frequency peak and, thereby, --;

on line 25, replace "The" with --Each of the--, and  
replace "are" with --is--, and  
on line 26, after "amplified by" insert -- an--, and  
after "102 and" insert -- the network defined by components 122-  
128 provides a desirable low frequency enhancement or non-linear  
distortion to the signal. Each of the resulting enhanced signals  
is--, and after "through" insert -- a set of the--.

*B10*

The previous amendment to page 20, line 23 of the  
DETAILED DESCRIPTION OF THE INVENTION section of the present  
specification (See the Preliminary Amendment dated February 19,  
1996) is reproduced below in its entirety and amendments thereto  
are as indicated:

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Each of the above described embodiments produce generally  
the same type of enhancement [to] in an electronic audio  
signal. Broadly, an apparatus for enhancing the quality of  
an electronic audio signal, according to the principles of  
the present invention, comprises a circuit operatively  
adapted for distorting an input audio signal transmitted  
therethrough by non-linearly amplifying enhancing harmonics  
or frequencies in the input audio signal. By increasing the  
amplitude of enhancing harmonics in this manner, the  
resulting enhanced audio signal exhibits an improved  
harmonic quality compared to that of the input audio signal.  
Until the present invention, electronic audio signals were  
not enhanced in this manner. Accordingly, an apparatus for  
enhancing the quality of an electronic audio signal,  
according to the principles of the present invention,  
comprises any circuit operatively adapted for distorting an  
input audio signal transmitted therethrough into such an  
enhanced audio signal.

A typical electronic audio signal has a

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[frequency] bandwidth [with a plurality] of frequencies between a low end and a high end in the range of human hearing. The range of human hearing can vary, but it typically ranges between about 20 Hz on the low end and about 20 KHz on the high end. [An enhanced audio signal, according to the principles of the present invention,] One way of identifying a circuit according to the present invention is to transmit an electronic audio signal through the circuit, where the audio signal is in the form of a square wave having a plurality of frequencies. When the square wave audio signal is so transmitted, the resulting output audio signal is non-linear [with] and includes frequencies which increase in amplitude as per increasing frequencies from a desired reference frequency toward [its] the high end of the signal. It is desirable for the present circuit to be adapted, like exemplary circuits above, such that the frequencies of the square wave signal are increased in amplitude, as per increasing frequencies, to a high frequency peak. When the square wave audio signal is transmitted through some of the embodiments disclosed herein, the resulting output audio signal will also exhibit an increase in amplitude as per decreasing frequencies from the reference frequency toward the low end of the signal. This increasing amplitude as per increasing frequencies and increasing amplitude as per decreasing frequencies each occur[s] over at least a portion of the frequency bandwidth of the [enhanced] output audio signal.

Satisfactory results have been obtained with [Each of the] exemplary circuits, such as those described above, which produce an [enhanced] output audio signal having a reference frequency of about 1 KHz, when the square wave input audio signal is transmitted therethrough. It is desirable for the present circuit, such as some of the

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examples described above, to be designed such that the reference frequency is substantially similar in amplitude to that of the square wave input audio signal. It is desirable for the input and output of a system [an enhanced audio signal produced] according to the principles of the present invention, such as [by] the above described exemplary circuits 10 and 100, to have volume levels that are perceptively about the same. [be substantially similar in amplitude to that of the input audio signal. It is also desirable for the input audio signal to be additionally distorted such that the frequencies in the enhanced audio signal increase in amplitude as per decreasing frequencies from the reference frequency toward its low end, over at least a portion of the frequency bandwidth.]

An enhanced audio signal, according to the present invention, exhibits an improved harmonic quality compared to that of the input electronic audio signal.

*B12*

~~In the ABSTRACT OF THE INVENTION section, on line 2, replace "adding harmonics to the electronic" with -- non-linearly increasing the amplitude of selective frequencies or harmonics in the original audio signal such that an enhanced audio signal is produced which exhibits an improved harmonic quality compared to that of the original --, and replace "The" with --One embodiment of the--.~~

IN THE CLAIMS

Please amend claims 2, 5, 9, 12, 14, 15, 17, 18, 24, 28 and 29 as follows:

*B13*  
*CONF*

2. (Twice Amended) The apparatus [of] as recited in claim 24, wherein said inducing coil is [being] at least one of disposed around said receptor coil, wrapped around and at least